Leucism in Five-Striped Palm Squirrels: A Rare Phenomenon record in Gujarat, India

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Unusual coloration in mammals and other animals is a congenital disorder known as hypopigmentation, which is related with genetic diversity and mutations. This disorder often manifests as albinism or leucism. Leucism is a genetic condition linked to many pigments, whereas albinism is linked to just one pigment. The color of the eyes is the primary means of differentiation between leucism and albinism. Albinos have red eyes whereas leucism refers to the partial or total decolouration of certain body parts while retaining the typical color of eyes, and nails (Bensch et al., 2000). Several factors contribute to the occurrence of leucism, including pollution, environmental changes, poor diet, and follicular damage (Møller & Mousseau, 2001).

Leucism is more common in small and isolated populations due to inbreeding, which allows recessive alleles to be expressed. There have been documented cases of leucism in the five-striped palm squirrel, a small rodent species belonging to the Sciuridae family. This species has four subspecies native to India and Sri Lanka, with the studied population endemic to the west part of India. Previous records also suggest habitat fragmentation to

Figure 1: Photograph of the white squirrel recorded at Thol Bird sanctuary

influence leucism in individuals, based on observations made from semi-forest and human habitation areas (Kumar & Princy, 2021).

The leucistic Palm Squirrel was observed at the Thol Lake Bird Sanctuary by Kunal, Rushika and photographs were taken by Saman under the leadership of senior bird watcher Bharatkumar Patel. This bird sanctuary is located between 23.25 and 23.50N and 72.500 and 72.75E. The man-made Thol Lake, which was originally made for irrigation purposes, was later designated as a sanctuary looking to its floristic diversity and providing feeding and resting grounds for residential and migratory avifauna (Vyas & Patel, 2015). The Nikon A211 binoculars were used for observations, while the Panasonic Lumix DC-G9L camera and 100-400 mm Lumix lens was used to capture further photographic evidences. To avoid human intervention, all observations (~20 total) were made from a minimum distance of 8 feet. The observed squirrel displayed a complete white coloration with pinkish snout, ears, and limbs, while its eyes maintained a normal color (Figure 1,2,3). Until now, there have been no reported cases of leucism in Five-striped Palm Squirrels from Gujarat. Therefore, this leucistic Palm Squirrel sighting in Gujarat, India, could potentially be the first recorded instance. The first case of leucism was documented from Maharashtra's Satara District (Sayyed & Mahabal, 2016). The Ghazipur squirrel represented the second recorded case of leucism in *Funambulus pennanti* in India (Sayyed & Mahabal, 2016). Leucism in other Funambulus species has been reported in Tamil Nadu and Goa (Kumar & Princy, 2021).

Figure 2: Photograph of the white squirrel with black eyes

It was amazing to see an albino squirrel with regular eye color; it seems as if the squirrel was powdered from the bottom up. Watching this marvel was enjoyable. It is worth noting that the survival rate of leucistic animals tends to be lower compared to non-leucistic individuals. This is

primarily due to their distinctive features, which makes them more noticeable and easy prey to predators.

Figure 3: Photograph of the leucistic Palm Squirrel.

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